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MISCELLANEOUS.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

Fifth Ordinary Meeting, 1846-7. Monday, 15th March, 1847.

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,
in the Chair.

The following Gentlemen were elected Fellows:—

William Newmarch, Esq.	|	Lewis Stephens Lyne, Esq.
		Thomas Longman, Esq.

The following Paper was read:—

Vital Statistics of the East India Company's Armies in India, European and Native. By Lieut.-Col. W. H. Sykes, V.P.R.S.

Sixth Ordinary Meeting, 1846-7. Monday, 19th April, 1847.

Lieut.-Colonel W. H. Sykes, V.P.R.S., Vice-President,
in the Chair.

The following Minute of Council was read:—

The Fellows are at liberty to purchase the back numbers of the Journal of the Statistical Society at half the publishing price.

The following Gentlemen were elected Fellows:—

G. W. Alexander, Esq.	|	William Brook, Esq.
Frederick Mowatt, M.D.		Samuel Parsons, M.D.

The following Paper was read:—

Education in the Mining and Manufacturing Districts of South Staffordshire; being a Report to the Council of the Statistical Society of London. By Joseph Fletcher, Esq., Hon. Sec.

Seventh Ordinary Meeting, 1846-7. Monday, 17th May, 1847.

Right Hon. Holt Mackenzie, Vice-President, in the Chair.

The following Gentleman was elected a Fellow:—

Thomas Gray, Esq.

The following Papers were read:—

Historical and Statistical Account of the Markets of London. By Joseph Fletcher, Esq., Hon. Sec.

The Treatment of the Sick in the Norwegian Penitentiaries. By H. Norton Shaw, M.D.

Eighth Ordinary Meeting, 1846-7. Monday, 21st June, 1847.

The following Gentlemen were elected Fellows:—

P. F. Durham, Esq.		Charles Burls, Jun., Esq.
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The following Paper was read:—

On the Mortality among Her Majesty's Troops serving in the Colonies during the years 1844 and 1845. By Lieut.-Col. A. M. Tulloch, F.S.S.

Seventeenth Annual Meeting of the British Association for the Advancement of Science, held at Oxford, 23rd—30th June, 1847. Statistical Section.

This Section had its usual attendance of firm friends and able contributors to the advancement of social science. The following were its Officers and Committee :—

President.—Travers Twiss, D.C.L., F.R.S.

Vice-Presidents.—Sir Charles Lemon, Bart., F.R.S., Henry Hallam, Esq., F.R.S., Lieut.-Col. W. H. Sykes, V.P.R.S., G. R. Porter, Esq., F.R.S.

Secretaries.—Rev. W. Hayward Cox, B.D., J. T. Danson, Esq., F. G. P. Neison, Esq.

Committee.—Sir John P. Boileau, Bart., Sir Thomas Dyke Acland, Bart., M.P., W. Cooke Taylor, Esq., LL.D., His Excellency J. Bancroft, American Minister, James Heywood, Esq., M.P., Professor Hancock, Prof. Pol. Econ., Dublin, M. Bielke, Secretary of the Danish Legation, Professor Royle, King's College, London, M. Ricardo, Esq., W. Neild, Esq., Milne Edwards, Esq., The Lord Bishop of Norwich, Major-General John Briggs, The Master of University College, Alderman W. Thorp, Oxford, Joseph Fletcher, Esq., Hon. Sec. Stat. Soc. of London, Monckton Milnes, Esq., M.P., Professor von Mohl, of Heidelberg, Rev. G. H. Sackeverell Johnson, Queen's Col., Rev. Edmund Larken, M.A., Trinity Col., Rev. E. Wyatt Edgell, H. Norton Shaw, M.D.

The meetings of the Section were held in the Natural Philosophy School; and at their close it was proposed by Col. Sykes, and carried unanimously, that the thanks of the Section be given to the President, Dr. Twiss, and to the Local Secretary, the Rev. W. Hayward Cox, for their zealous and persevering regard to the interests of the Section and the advancement of its objects.

The following are the contributions submitted to the Section.

1. On the Resources of the Irish Sea Fisheries. By R. Valpy, Esq.
2. On the Revenue Statistics of the North-Western Provinces of British India. By Lieut.-Col. W. H. Sykes, V.P.R.S.
3. On the Results of a Scheme by Mr. Vandaleur, for Improving the Condition of Labourers, tried at Ralahine, County Clare, Ireland. By the Rev. E. G. Larkin.
4. On the Influence of Education, shown by Facts recorded in the Criminal Tables for 1845 and 1846. By G. R. Porter, Esq., F.R.S.
5. On the Want of Educational Establishments, adapted to those born with Deficient or Feeble Mental Organization.
6. On the Cotton Commerce of India. By Professor Royle.
7. On the Distribution of Races in the present Kingdom of Denmark. By M. Bielke, Secretary of the Danish Legation.
8. On Education and Crime in England and Wales. By F. G. P. Neison, Esq.
9. Analysis of the Census of New South Wales. By F. G. P. Neison, Esq.
10. On the Moral and Educational Statistics of England and Wales, with Diagrams. By Joseph Fletcher, Esq., Hon. Sec. Stat. Soc. of London.
11. On the Variations in the Supply of Silver in Ireland, during the Operations for the Relief of Distress in 1846-7. By Professor Hancock.
12. The Prices of the *Cerealia* and other Edibles of India and England, compared. By Lieut.-Col. W. H. Sykes, V.P.R.S.

The next Meeting of the British Association is to be at Swansea, on Wednesday, the 9th day of August, 1848.

STATE OF THE PUBLIC HEALTH IN THE FIRST QUARTER OF
THE YEAR 1847.

"THE Quarterly Returns are obtained from 117 Districts, sub-divided into 582 Sub-Districts. *Thirty-six* Districts are in the Metropolis, and the remaining 81 comprise, with some agricultural Districts, the principal towns and cities of England. The population was 6,612,800 in 1841."

Winter appears to be the season in which it is most natural to man to die. For many years the number of deaths in England has been highest in the winter and lowest in the summer quarter. In the summer quarter of 1846 the reverse was observed; the mortality was greater than it had been in any quarter of the seven preceding years; and in the last winter quarter ending March 31, 1847, 56,105 persons died in the districts which make the returns; a number greater than has been registered in any corresponding quarter, and 6,035 above the corrected average. The deaths in the quarter in all England and Wales may be estimated at 120,000*.

The annexed Table shows that the mortality was considerably above the average in the winter quarters (ending March 31st) of 1840, 1841, 1845, and 1847, and much below the average in the winter quarters of 1839, 1842, 1843, 1844, and 1846.

	1839	1840	1841	1842	1843	1844	1845	1846	1847
Deaths Registered in the March quarters of 9 years	42,410	46,376	46,967	44,903	43,748	46,196	49,949	43,850	56,105
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1839 at the rate of 1·75 per cent. annually..	43,581	44,344	45,120	45,910	46,713	47,531	48,362	49,209	50,070
UNHEALTHY SEASONS Difference above the calculated number..	..	2,032	1,847	..	..	..	1,587	..	6,035
HEALTHY SEASONS. Difference below the calculated number..	1,171	..	..	1,007	2,965	1,395	..	5,359	..

The temperature was below the average, and the severity of the weather was one cause of the increased mortality. It is, however, worthy of remark, that at Greenwich the temperature was lower in the winter quarter of 1845 when the deaths returned were 49,949, than in the past quarter of 1847, when the deaths were 56,105. An interesting account of the meteorology of the quarter will be found in page 281, drawn up with great care by Mr. Glaisher, from returns for which I have to thank several gentlemen in the country.

The Registrars in their notes ascribe the increased mortality generally to inflammation of the lungs and air tubes, to typhus, and other diseases, and the effects of cold on the aged. The high price of provisions is also mentioned.

The Registrar of the Abbey sub-district, Bath, says:—"The price of provisions has, during the quarter, been about a third above the average, and there has been a want of employment."

The Registrar of St. James, Bristol:—"The increase of deaths, on the corresponding quarter of last year, must be attributed principally to the severity of the weather during the early part of this quarter. There has been no epidemic disease in the district. The children of the poor have suffered much, and mortality has prevailed among them, in consequence of many of the men, who are very generally masons' labourers, being unemployed in the winter season, when their families be-

* The yearly deaths in the districts from which the Quarterly Table is framed, comprise 47·11 per cent. of the deaths in all England and Wales; the proportions in the March quarter are 46·49; in the June, 45·74; in the September, 48·21: in the December, 48·16 per cent.

come destitute, and the younger children deprived of proper clothing and support, are more exposed to inflammatory complaints, particularly of the chest."

In Lincoln, north-east, it is said on the other hand, "work has been abundant in this district, and wages tolerably good." The "scarcity and dearness of provisions," and the "imperfect protection which the dwellings and clothing of the poor afford from cold," are referred to by the Registrars of Bulwell and Greasley, Basford; the "high price of provisions and the scarcity of employment," by the Registrar of Sutton, Macclesfield.

The Registrar of Little Bolton remarks that:—"The severity of the weather, and the extremely high price of provisions, have caused such a severe pressure upon the working classes, as to prevent them from obtaining anything like a sufficiency of food, which, with the absence of other comforts, has operated materially in promoting epidemics and other diseases."

The deaths in the March quarters of 1846 and 1847 were, in the district of—

Brighton	211 and 369	Wolstanton	239 and 326
The Isle of Wight	178 , 251	Birmingham	876 , 1,187
Portsea Island	290 , 430	Aston	265 , 354
Winchester	107 , 173	Leicester	342 , 442
Windsor	75 , 134	Basford	344 , 514
Oxford	75 , 122	Macclesfield.....	387 , 541
Bedford.....	172 , 279	Great Boughton (with Chester)	279 , 394
Cambridge	139 , 180	Liverpool.....	1,934 , 3,068
Devizes.....	83 , 162	Blackburn	546 , 786
Dorchester	107 , 178	Preston	566 , 813
Exeter	202 , 290	Prescot	237 , 481
Plymouth	194 , 254	Manchester	1,527 , 2,185
Bath	388 , 548	Huddersfield	629 , 1,006
Bristol	427 , 545	Leeds and Hunslet	996 , 1,557
Clifton	376 , 508	Gateshead	255 , 330
Stroud	189 , 339	Tynemouth	318 , 434
Cheltenham	215 , 316	Newcastle-on-Tyne.....	567 , 655
Shrewsbury	112 , 165	Carlisle	248 , 340
Worcester.....	153 , 226	Abergavenny	327 , 450
Kidderminster	150 , 218	Wrexham	207 , 336
Dudley	588 , 931		
Wolverhampton	574 , 769		

The disastrous effect of the immigration of the Irish poor on the health of English towns, was dwelt on in the previous Quarterly Return. The evil increased during the winter quarter; and the deaths of Liverpool, where the mortality has always been high, were 3068, or 1134 more than in the winter quarter of 1846, and nearly 1000 above the average of ordinary seasons. The Registrars' notes, under Liverpool, Manchester, Stockport and Preston, contain some information on the subject. Notwithstanding the depressing aspect of this overflow of pauperism from a third part of the United Kingdom, left for centuries without an efficient poor-law, the authorities of the English towns, which the visitation has reached, appear to have made every provision in their power for the relief of the unfortunate people. For thousands of the Irish peasantry they have found food; for thousands, graves; and many of their officers and townsmen have fallen in the courageous discharge of the duties thrown on them,—in one sense by a natural calamity—in another by a national crime. The Registrar of the Howard Street sub-district, Liverpool, remarks that

"The return shows a very great increase in the mortality of this district, which is, without doubt, solely attributable to the many thousands of Irish paupers who have landed here within the last three months, bringing with them a malignant fever, which is here very properly called "the Irish fever;" and many hundreds of them were suffering from diarrhoea and dysentery when they arrived, which will account for so many deaths from those causes. Everything which humanity could devise and money carry out for their cases has been adopted by the Select Vestry; but so many thousands of Irish are continually pouring in, and their habits are so disgustingly filthy, that little can be done as yet to stay the great mortality amongst them. Perhaps there is not a parallel case to Liverpool for the last two months in the history of the country."

The new poor laws now passing through, or about to be proposed to Parliament, will no doubt mitigate these evils.

Fifteen thousand, two hundred, and eighty-nine deaths were registered in London during the first thirteen weeks of the year; a greater number than has been registered in any previous winter since the weekly table commenced. The district of Lewisham, and the sub-district of Hampstead, united now to the London districts, have only added 171 to the deaths. Upon the whole the health of London, like that of the rest of the country, has been below the average; and although the causes are to a certain extent accidental, and as we may hope, transitory, it is evident that the health of towns in England is at present stationary, not to say retrograding.

The English system of registration, however imperfect it may still be, has realized the expectation held out in the opening speech of the minister who introduced the measure to Parliament, in so far as "it enables the Government to acquire a general knowledge of the state of the population of the country*." In successive Reports the births, deaths, and marriages have been compared with the population of different districts; the prevalence of diseases has been traced in various parts; and the irrefragable proofs of the high mortality in towns induced the late Government to appoint a commission of inquiry, which resulted in a bill submitted to Parliament by Lord Lincoln and Sir James Graham. A new bill for improving the health of towns has been prepared and brought in by the Viscount Morpeth, Lord John Russell, and Sir George Grey. As this bill is likely to occupy the attention of Parliament in a future Session, it may be useful to introduce here some extracts from a series of calculations, based on the census returns, and the deaths registered during the seven years 1838—44. The facts and methods of calculation will be given at length in the next Annual Report; in the meantime it will be sufficient to observe that the object of the investigation is to exhibit the mortality at different periods of life in the divisions, counties, towns, and groups of country districts into which England and Wales have been divided. From these results the duration of life can be deduced. Corrections have been made for the increase of population, deaths in hospitals, and other disturbing causes.

The mortality in Liverpool, Manchester, and some other places has been before adverted to. The subsequent Tables show the mortality of all the districts now included in the London tables of mortality. They afford ample materials for reasoning; but I shall here only direct attention to a few of the points bearing more immediately on the great question of the health of towns. London contained 1,950,000 inhabitants in the middle of the year 1841; and 342,000 deaths were registered within its limits in the septennial period, of which 1841 was the middle year. The deaths on an average were 48,857 annually. To 1000 females living at all ages 23 died, while to 1000 males living at all ages 27 died yearly. The mortality of females in the neighbouring counties, during the same seven years, was from 18 to 20; of males 19 to 21 in the 1000; the mortality of females in London was 5, of males 8 in the 1000 more than in the healthiest county. Out of an equal number of males living, there were 3 deaths in London for every 2 in the healthy counties. Out of 1000 boys under 5 years of age in Surrey, and 1000 in Sussex, 48 and 50 died annually; out of 1000 in London, 93 died annually. The mortality of children under 5 years of age is twice as great in London as in the adjacent counties, including several towns.

In	Annual Deaths at all Ages to		Annual Deaths under 5 Years of Age to	
	1000 Females Living.	1000 Males Living.	1000 Girls Living.	1000 Boys Living.
Surrey	18	19	41	48
Sussex	18	19	42	50
Hampshire	18	20	44	52
Kent	19	21	48	57
Berkshire.....	20	20	46	53
London	23	27	80	93

* See Speech of Lord John Russell on bringing forward the Bill for the Registration of Births, Deaths, and Marriages.—*Mirror of Parliament*, p. 131, 1836.

The excess of deaths in London is not the result of climate, for the climate differs little from that of surrounding counties; and some of the London districts are not more unhealthy than many country districts. Take Lewisham, for instance, comprising Blackheath, Sydenham, Eltham, and Lewisham itself. The annual mortality of females was 16; of males 18 in 1000.

The actual deaths registered in London during the 7 years 1838-44 were 342,000

If the mortality during the period had not been greater than in Lewisham, the deaths in London would have been about 244,128

Excess of deaths in London 97,872

Here are 97,000 deaths in 7 years from causes peculiar to London. Other districts may be taken in the place of Lewisham, but the result would be the same.

A considerable part of the population of London is recruited from the country, immigrants entering chiefly at the ages 15 to 35, in a state of good health. The sick and weakly probably remain at home; many of the new-comers too, unmarried, when attacked in London by slow consumption, the most fatal disease at the ages 15 to 35, return to their father's house to die; so that the mortality of the great city is made to appear in the returns lower at those ages than it is. If we take children under 5 years of age, where neither these disturbing causes nor occupation interfere, the deleterious influence on health, of London in its present state, will appear undisguised in all its magnitude.

The deaths registered in London (1838-44) under 5 years of age were 139,593

The deaths, if the mortality had not been higher than in Lewisham, would have been 80,632

Excess of deaths in London among children 58,961

Here are more than 58,000 children destroyed in London within 7 of the last 10 years.

In these plain and appalling facts, in the detailed statements that follow of the mortality at each age of life in the several districts, or in the circumstances of the several parts of the population, it is difficult to discover any valid reasons for excluding London from the operation of the measure of Her Majesty's Government for "improving the Health of Towns in England."

There are, however, circumstances peculiar to the metropolis, which present difficulties, and which must be taken into account. The Health of Towns Bill—with the Improvement Clauses—proposes to enable the mayor, aldermen, and burgesses of corporate towns to prepare plans and maps of their respective jurisdictions; to lay out, pave, improve, cleanse streets; provide market-places and slaughter-houses; remove nuisances and dangerous buildings; regulate lodging-houses; secure the ventilation of public buildings; prevent smoke and extinguish fires; lay down sewers and drain houses; procure supplies of pure water and artificial light. It proposes to give the same powers to town commissioners, two-thirds of whom are to be elected by the rate-payers—one-third to be appointed by Her Majesty—in unincorporated towns. It provides the constituted authorities with qualified officers. The town councils or town commissioners are to appoint surveyors. The First Commissioner of Her Majesty's Woods and Forests, and three others, are to be "The Commissioners of Health and Public Works" to carry out the Bill—appoint Officers of Health, Inspectors, Auditors, to advise, and to aid the local authorities. The Bill gives the "Commissioners of Health and Public Works" power to enforce few or no improvements; they can only suggest them; nothing can be done without their knowledge; some things require their approval. The peculiarity of London consists in this, that of its 1,950,000 inhabitants, in 1841, dwelling in 263,000 houses, valued at a rental of nearly £8,000,000, and standing on 115 square miles of land—only 129,201 men, women, and children, dwelling in 16,264 houses, valued at £825,033, standing on an area of less than a single square mile north of the Thames—have the advantage of Municipal Institutions. The rest of the metropolis is governed by innumerable Vestries, Paving Boards, Sewers' Commissions, Water Companies, Gas Companies, and other bodies, which escape observation, and, to a certain extent, responsibility. The Commissioners appointed to inquire into Municipal Corporations in 1837, reported that, in 1831, the assessed taxes paid by the city were £205,476, by the rest of the metropolis included in the Parliamentary Boroughs, £1,022,131. "With respect," they say, "to the nature of the population, it is well known that, on the one hand, the City contains by far the most active commercial

district of the metropolis, and that it forms the northern bank of the highest part of the Thames accessible to large vessels ; and, on the other, that it does not contain either of the Courts of Law, the Houses of Parliament, or Government Offices, or generally speaking, the residences of the higher or more opulent classes." The "Corporation Reform Act," in other cities brought all the parts that would popularly be termed the town, within the scope of the municipal authority. Having "pointed out how small a proportion of the metropolis is comprehended within the municipal boundary," they profess themselves "unable to discover any circumstances justifying the present distinction of this particular district from the rest, except that in fact it is, and had long been so distinguished*." The Health of Towns' Bill, without raising the question of Municipal Reform, proposes to deal tenderly, but impartially with London; it leaves the City in possession of all its privileges, and will apparently give to it the same powers under the Act, and subject it to the same inspection as the Reformed Municipal Corporations; while the rest of the metropolis is to be dealt with on the same general principle as unincorporated towns, the Act being put in execution by "Town Commissioners," "possessed of real or personal estates to the amount of £5000, or rated to the relief of the poor upon the annual value of not less than £50, of whom one-third shall be from time to time appointed by Her Majesty, and the remaining two-thirds shall be elected by the rate-payers of the several parishes or places included within such district." Such is a brief outline of the important measure which has been proposed by Her Majesty's Government to improve the Health of London, as well as of the other Towns of the Kingdom, and so to put a stop if possible to the sickness, suffering, and dreadful loss of life brought to light by the Registration Returns.

Without going more into detail, contending that the details admit of no improvement, or being sanguine enough to imagine that the Municipal Authorities will carry out as rapidly as could be desired the plans for the improvement of the health of the town population—it must be admitted that, on the whole, the Health of Towns' Bill is an excellent measure, and well calculated to diminish the evils which have been discovered, and of which the effects have been recorded in these periodical returns. It is no innovation on the institutions of the country, and rests on no newfangled doctrines. It extends the rule of a Cabinet Minister from "possessions" which Mr. Burke declared "fitter for the care of a frugal land steward than of an office in the state†," to the domain of National Health, which has always held the first place in the meditations of Legislators ; it concentrates offices that ought not to be separated in the hands of the municipal authorities, still maintained in close connexion (as they always have been) with the Crown ; it seeks to secure water, pure air, and a little sunshine, for the inhabitants of cities—now so large, active, and important a part of the population—and to extend to the house and street of the tradesman, artisan, and labourer, a share of the advantages which elsewhere are the boon of nature, by the use of means which have been suggested by science, and sanctioned by long experience.

A brief sketch of the Health of Towns' question will show that it is not based on new, but on well established doctrines. The influence on health, of exercise, food, and temperature, which is modified by clothing, firing, and lodging—is universally known. The command over these necessities of life depends on the freedom, industry, and commerce of a country; protection against fatal privation is afforded by the laws. The equal importance of air, water, and locality, was perceived by Hippocrates, who wrote his celebrated treatise on these topics four or five centuries before the Christian era. The exposition of a city to the rays of the rising or setting sun—to the north or the south; the qualities of the waters used by the inhabitants; and the nature of the soil and climate produced effects on the character, diseases, and institutions, which he observed and described. In Scythia and Egypt, Greece and Asia, man was not then the same; in general, the "form and disposition corresponded with the nature of the place." This doctrine, illustrated by Cicero‡, exaggerated by Montesquieu, has prevailed down to the present day; and

* See Extract from the Commissioners' Report, page 14.

† Burke's Speech on Economical Reform.

‡ See the Oration *contra RULLUM*, on the Agrarian Law: "Non ingenerantur hominibus mores tam a stirpe generis, ac seminis, quam ex iis rebus, quae ab ipsa natura loci, et a vita consuetudine suppeditantur; quibus alimur, et vivimus." Instancing the Carthaginians and Ligurians he adds: "Campani semper superbi boni-

one of the latest physiologists treating of "domestication," after having shown how the varieties of species of animals arise in the tame, and disappear again in the wild state, observes that, "the modifiers of the human race, as well as of domestic animals, are always local circumstances, habitation, kind of life, diet; the first effects being variations in size and colour, and then in the proportion and form of organs*."

The influence of these elements on health, and of the others with which the sanitary measure deals, was emphatically stated sixty years ago by Dr. Price, no mere theorist in this matter, but the scientific founder of the Equitable Insurance Society. After showing, from a comparison of the duration of life, in London and Holy Cross, Stockholm and Sweden, Manchester and the parts around, that human life is shorter by almost one-half in cities than in the country, he adds:—

"From this comparison it appears with how much truth great cities have been called the graves of mankind. It must also convince all who consider it, that, according to the observation at the end of the Second Essay, it is by no means strictly proper to consider our diseases as the original intention of nature. They are, without doubt, in general, our own creation. Were there a country where the inhabitants led lives entirely natural and virtuous, few of them would die without measuring out the whole period of the present existence allotted them; and death would come upon them like a sleep, in consequence of no other cause than gradual and unavoidable decay. Let us then, instead of charging our Maker with our miseries, learn more to accuse and reprobate ourselves.

"The reasons of the baleful influence of great towns, as it has been now exhibited, are plainly—First, the irregular modes of life, the luxuries, debaucheries, and pernicious customs, which prevail more in towns than in the country. Secondly, the foulness of the air in towns, occasioned by uncleanliness, smoke, the perspiration and breath of the inhabitants, and putrid streams from drains, churchyards, kennels, and common sewers†."

This induction, drawn with great sagacity from a limited number of facts, gradually acquired strength; the experiments in prisons and the navy confirmed it; Mr. Milne after Dr. Price demonstrated the high mortality of towns, and of marsh lands; and Mr. Edmonds in the *Lancet*, proved from the census and the returns, imperfect as they were, of the parish registers for six towns of England, for London and the several counties, as well as from correct returns for Glasgow, that the mortality at all ages, was from about 2·8 to 3·0 per cent. in towns—nearly 2·1 per cent. in all England, and as low as 1·7 or 1·8 in some counties. Mr. Edmonds also showed, that the mortality bears a certain relation to sickness at each age. For every annual death, two persons are constantly suffering from sickness, of a severity that disables labouring men from work. According to Mr. Neison's recent observations, there are 2·5 constantly sick in Friendly Societies to one death under 60; the recorded sickness after 60 is greater; the sickness in infancy is unknown. But if we assume that 2·5 are sick to one death—and this proportion certainly does not include slight illness, or all for which people take physic—the numbers constantly sick in London were 122,000, and the annual attacks of sickness more than 1,220,000, during the seven years 1838–44; the number of annual attacks would have been at least 350,000 less, and the number constantly sick would have been 35,000 less, if the health of London had been as good even as that of Lewisham, one of the districts within its own limits. This view, and all the principal facts known in connexion with the public health of England, were discussed in the article *Vital Statistics*, of McCulloch's *Statistical Account of the British Empire*, which appeared in 1837. The cholera epidemic, followed by an influenza in 1837, more fatal than cholera, and an epidemic of typhus, had drawn attention to the state of public health; the Registration Bill was brought into operation; Dr. Arnott, Dr. Kay (now Kay Shuttleworth), and Dr. Southwood Smith, were appointed by the Poor Law Commissioners to inquire into the causes of fever in parts of London in 1838; Mr. Chadwick conducted an inquiry into the health of many towns of the kingdom in 1839; subsequently, a Committee of the House of Commons, of which Mr. Slaney was chairman, collected evidence and drew up a report in 1840; and in 1843, a Royal Commission was

tate agrorum, et fructuum magnitudine, urbis [Capuae] salubritate, descriptione, pulchritudine," &c.

* Prices's Works, by Morgan, 7th ed. vol. ii. p. 129.

† Geoffroy, Saint Hilaire, *Art. "Domestication,"* in the *Encyclopédie Nouvelle*, Paris, 1838.

appointed to inquire into the whole subject. The reports of the Commission * appeared in 1844 and 1845.

In the first annual report from this office, in 1839, the mortality in 32 districts of London was calculated, and it was shown that, in 1837, the mortality increased from 18, in the healthiest districts, to 32 and 39 in the crowded poor districts; and as wages are better, and the food more substantial in London, than are enjoyed by the families of agricultural labourers, the source of the high mortality in cities was traced to the insalubrity of the atmosphere, the causes of which were enumerated†. The six reports which followed contained more information on the subject; and in connexion with the Census, fully established the early opinions of the influence of air, water, and locality on health—and the principle "that the mortality has a tendency to increase as the population increases, but that the unhealthful tendency can be counteracted by artificial agencies; in other terms, that the mortality of cities in England is high, but that it may be immeasurably reduced." Some room for doubt, however, existed, as the calculations in the earlier reports relative to London were partly derived from the Census returns of 1831; as the deaths were known only for a few years; and as the mortality at different ages could not be calculated, the ages of the living in London having been unfortunately not ascertained at the Census of 1831. All doubt must, however, be dissipated by the present complete series of facts, which embrace all the elements required in statistics to determine the mortality and the duration of life. Instead of the inhabitants of London "measuring out the whole period of the present existence allotted them," it is found that, in 7 years, 139,593 perished in infancy (under 5 years of age); 40,828 in youth (5 to 25); 109,126 in manhood (25—65), and that only 52,453 attained the age of 65 and upwards. Instead of "death coming upon them like a sleep," when the faculties are dulled by age and slow decay, it convulses tender infancy, falls with burning fevers upon man in his prime, snatches away the mother with the babe still upon her breast. But not to take an extreme view, nor to be too sanguine—and above all, to avoid any exaggeration—let us set down here the deaths in London and the deaths which would have happened at different ages if the mortality had not been higher than it was in Lewisham, where any one who will take the trouble may ascertain that many obvious and easily removed causes of insalubrity still exist.

Age.	Deaths in London.	Deaths that would have happened if the mortality had been the same as in Lewisham.		Excess of deaths in 7 years by causes peculiar to London	
		in 7 years	by causes peculiar to London	in 7 years	by causes peculiar to London
0 — 5	139,593	....	80,632	....	58,961
5 — 25	40,828	....	35,706	....	5,122
25 — 65	109,126	....	83,447	....	25,679
65 and upwards	52,453	....	44,343	....	8,110

All ages 342,000 244,128 97,872

Such is the excess of mortality. The excess of sickness must have been still greater.

At the two or three meetings held to oppose the Government Bill for improving the Health of Towns, by bodies holding local trusts, no reference was made to the loss of life constantly going on in London. It appears to have been unknown to the speakers, or to have been taken for granted, because the mortality is little more than half as high in the present as it was in the 17th century, that the health of the metropolis is perfect; that plague having been expelled, typhus and consumption may be tolerated. Now the plain fact is, that one day with another 134 persons die daily in London; that the great majority are untimely deaths,—children, fathers, mothers, in the prime of life; and that at least thirty-eight die daily in excess of the rate of mortality which actually prevails in the immediate neighbourhood. Thirty-eight persons are destroyed every day in London by ascertained causes. If these deaths took place on London Bridge or Newgate, would any sensible man in the City oppose any reasonable measure devised by a Minister of the Crown, to put a stop to the

* The Commissioners were:—The Duke of Buccleuch; Lord Lincoln; R. A. Slaney, Esq.; George Graham, Esq.; Sir H. T. De La Beche; Dr. Lyon Playfair; Dr. D. B. Reid; Richard Owen, Esq.; Capt. W. Denison, R.E.; J. R. Martin, Esq.; James Smith, Esq.; Robert Stephenson, Esq.; W. Cubitt, Esq.

† Reg.-Gen., 1st Rep., pp. 1, 108—117.

‡ Reg. Gen., 1st Report, 8vo. page 113.

frightful sacrifice of life? The City has consented to see Newgate partly free from fever—inspected by an officer of the Crown. Why is the disease cast out of criminals to be allowed to enter and destroy the labouring multitudes? Are their lives of less value? But the City itself, it is said, is as healthy as it can be; the authorities have done everything that can be done. A minister of health can suggest nothing which the City of London has not already accomplished. Has the Lord Mayor ascertained this by personal inspection? He has the conservancy of the swans and fish of the Thames: and so weighty has this duty been held that the first magistrate attended by the civic authorities proceeds periodically to hold courts of inspection and to ascertain the condition of these creatures. If some time after having been

“To Thames’s bank which fragrant breezes fill,”

and seen the white swans on the river, and the fishes glide through the clear waters, on landing from his barge below Temple Bar, he would place himself under the guidance of Dr. Lynch, a medical officer, and Mr. Hutchinson*, a surgeon and registrar of the city, they could lead the procession on the way to Newgate, Smithfield Market, Houndsditch, and the Tower, through alleys and lanes, and up courts inhabited by citizens of London, presenting a far different aspect: they would pass through streets on which the sun rarely shines, houses saturated with pestilential vapours—and breezes fanning sewers and excremental matter—the most fatal field of fever in the metropolis. They would see disease gleaming in the eyes of children, wasting the bodies of women, prostrating the strength of men. If they called for the registers of deaths for the City without the walls, they would find in them 13,631 names enrolled in seven years—five thousand of which would have had no place there if the “deliberate conviction” of the Commission of Sewers were well founded, that the “City of London for health, cleanliness, effective drainage, lighting, and for supply of water to its inhabitants, cannot be surpassed.”

I have arranged the thirty-six districts of the metropolis in the relative order of their insalubrity: the City of London within the walls stands ninth in the list, while the City of London without the walls (the East and West London districts) stands with Whitechapel, the last, the unhealthiest of the thirty-six. That Table displays results in many respects remarkable. If the short time which has elapsed since the calculations were completed had permitted it, I should have endeavoured to represent the different degrees of mortality in the districts of London, pictured to the eye on a shaded map. A general idea, however, may be formed of the distribution of the poison which causes death. According to latest researches, it is not a gas, but a sort of atmosphere of organic particles, undergoing incessant transformations; perhaps like malaria not odorous, although evolved at the same time as putrid smells; suspended like dust, an aroma, vesicular water in the air, but invisible†. If it were for a moment to become visible, and the eye could see it from central eminence such as St. Paul’s, the disease-mist would be found to lie dimly over Eltham, Dulwich, Norwood, Clapham, Battersea, Hampstead, and Hackney; growing thicker round Newington, Lambeth, Marylebone, Pancras, Stepney; dark over Westminster, Rotherhithe, Bermondsey, Southwark; and black over Whitechapel and the City of London without the walls. The district of St. Giles would be a dark spot in the midst of surrounding districts; St. George, Hanover-square, and St. James in Westminster, would be lighter than Marylebone, and St. Martin-in-the-Fields; part of the City of London within the walls would present a deep contrast to the City without the walls. This disease-mist, arising from the breath of two millions of people, from open sewers and cesspools, graves and slaughter-houses, is continually kept up and undergoing changes; in one season it is pervaded by cholera, in another by influenza; at one time it bears small-pox, measles, scarlatina, and hooping-cough among young children; at another it carries fever on its wings. Like an angel of death it has thus hovered for centuries over London. But it may be driven away by Legislation. If this generation has not the power to call the dead up from their graves, it can close thousands of graves now openinig. The poisonous vapour may yet clear away from London, and from all the other towns of the kingdom:—some of the sunshine, pure water, fresh air, and health of the country, may be given to the grateful inhabitants of towns by the parting voice of the Legislature.

* See Mr. Hutchinson’s accurate account of the wretched state of parts of the West London District, 5th Annual Report, 8vo., p. 537.

† This question is fully discussed in the Appendix to the Registrar-General’s Fifth Annual Report.

MORTALITY OF THE COUNTRY.

Quarterly Table of the Mortality in 115 of the Districts of England (including the Principal Towns), showing the Number of Deaths Registered in the Quarters ending March of the Four Years 1844-45-46-47.

Parts of Divisions and Districts.	Popula- tion 1841.	Deaths Registered in the Quarters ending Mar. 31st.				Parts of Divisions and Districts.	Popula- tion 1841.	Deaths Registered in the Quarters ending Mar. 31st.					
		Years.						Years.					
		1844.	1845.	1846.	1847.			1844.	1845.	1846.	1847.		
<i>Metropolis*</i> .													
West Districts..	301,326	1,975	2,240	1,867	2,146								
North Districts..	376,396	2,552	2,817	2,326	2,859								
Central Districts	374,759	2,647	2,767	2,156	2,742								
East Districts ..	393,247	2,975	2,976	2,503	3,420								
South Districts..	502,483	3,693	3,866	3,666	4,122								
Total+.....	1,948,211	13,642	14,686	12,515	15,289								
<i>South Eastern Division.</i>													
Maidstone.....	32,310	218	235	141	231								
Brighton.....	46,742	329	262	211	369								
Isle of Wight ..	42,547	207	228	178	251								
Portsea Island ..	53,036	344	388	290	430								
Winchester.....	23,044	170	147	107	173								
Windsor.....	20,502	123	97	75	134								
Total	218,181	1,391	1,357	1,002	1,588								
<i>South Midland Division.</i>													
St. Albans.....	17,051	109	121	74	100								
Wycombe.....	34,150	239	229	218	199								
Oxford.....	19,701	108	63	75	122								
Northampton ..	28,103	211	249	186	206								
Bedford.....	31,767	236	208	172	279								
Cambridge	24,453	228	154	139	180								
Total	155,225	1,181	1,024	864	1,086								
<i>Eastern Division.</i>													
Colchester.....	17,790	136	117	123	128								
Ipswich.....	25,254	174	124	159	197								
Norwich.....	61,846	425	711	325	379								
Yarmouth.....	24,081	196	165	232	148								
Total	128,921	931	1,117	839	852								
<i>South Western Division.</i>													
Dorset.....	22,130	148	156	83	162								
Dorchester.....	23,380	166	123	107	178								
Exeter.....	31,333	263	208	202	290								
St. Thomas	47,105	249	230	226	274								
Plymouth.....	36,527	269	261	194	254								
Kedruth.....	48,062	271	268	220	252								
Penzance	50,100	239	235	234	290								
Bath.....	69,232	507	520	388	548								
Total	327,869	2,111	2,001	1,654	2,248								
<i>Western Division.</i>													
Bristol.....	64,298	464	563	427	545								
Clifton.....	66,233	424	449	376	508								
Stroud.....	38,920	207	235	189	339								
Cheltenham	40,221	228	267	215	316								
Hereford.....	34,427	244	205	208	209								
Shrewsbury	21,529	163	164	112	165								
Worcester.....	27,130	214	173	153	226								
Kidderminster	29,408	242	233	150	218								
Dudley.....	86,028	547	776	588	931								
Walsall	34,274	197	260	259	292								
Wolverhampton	80,722	540	649	574	769								
Wolstanton	32,669	247	271	239	326								
Birmingham.....	138,187	1,118	1,275	876	1,187								
Aston	50,928	349	353	265	354								
Coventry.....	31,028	234	272	213	216								
Total	776,002	5,418	6,144	4,844	6,601								
Grand Total ..	6,612,900	46,136	49,949	43,850	56,105								

* The mortality of the districts of Wandsworth and Lewisham, and sub-district of Hampstead, is included in the above table, in each of the four years, though the deaths in Wandsworth did not appear in the Weekly Metropolitan Returns till 1844; nor those of Lewisham and Hampstead till 1847.

+ The last quarter in London ended March 27, 1847.

The former District of Leeds is now divided into the districts of *Leeds* and *Hunslet*, both included in the present return.

MORTALITY OF THE METROPOLIS.

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, in the Quarters ending March of the Four Years, 1844-45-46-47.

CAUSES OF DEATH.	Quarters ending March*.				CAUSES OF DEATH.	Quarters ending March*.			
	1844.	1845.	1846.	1847.		1844.	1845.	1846.	1847.
ALL CAUSES.....	13,471	14,528	12,376	15,289	III. Cephalitis.....	160	143	153	156
SPECIFIED CAUSES	13,403	14,491	12,322	15,245	Hydrocephalus.....	481	460	483	440
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases	2,457	2,506	2,277	1,926	Apoplexy.....	301	343	329	368
SPORADIC DISEASES.					Paralysis.....	281	298	273	342
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	1,282	1,450	1,273	1,386	Convulsions.....	702	636	511	619
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	2,177	2,193	2,046	2,296	Tetanus.....	8	3	7	2
IV. Diseases of the Lungs and of the other Organs of Respiration	4,644	4,923	3,807	5,981	Chorea.....	3	2	2	2
V. Diseases of the Heart and Blood Vessels	416	512	455	666	Epilepsy.....	57	62	73	113
VI. Diseases of the Stomach, Liver, and other Organs of Digestion	795	981	940	1,030	Insanity.....	22	15	21	28
VII. Diseases of the Kidneys, &c., &c.	93	115	130	169	Delirium Tremens.....	19	24	34	47
VIII. Childbirth, Diseases of the Uterus, &c.	114	174	150	205	Disease of Brain, &c., &c.	143	141	157	179
IX. Rheumatism, Diseases of the Bones, Joints, &c., &c.	74	98	121	141	IV. Laryngitis.....	9	23	35	62
X. Diseases of the Skin, Cellular Tissue, &c., &c.	23	12	53	46	Quinsy.....	17	25	10	17
XI. Old Age.....	1,018	1,127	612	971	Bronchitis.....	444	632	755	1,161
XII. Violence, Privation, and Intemperance	310	400	458	428	Pleurisy.....	24	28	33	67
I. Small Pox	252	481	77	82	Pneumonia.....	1,237	1,295	946	1,390
Measles	334	381	401	99	Hydrothorax.....	102	92	50	85
Scarlatina	536	421	221	196	Asthma.....	555	606	244	625
Hooping Cough	487	411	767	544	Phthisis, or Consumption.....	1,904	1,972	1,571	1,823
Croup	107	112	79	67	Disease of Lungs, &c., &c.	262	249	160	251
Thrush	45	50	35	38	Pericarditis.....	24	33	17	29
Diarrhoea	79	109	119	178	Aneurism.....	9	21	18	14
Dysentery	29	14	20	34	Disease of Heart, &c., &c.	383	458	420	623
Cholera	4	4	7	3	Teething.....	157	227	129	143
Influenza	66	34	22	63	Gastritis.....	19	14	24	23
Ague	5	5	4	4	Enteritis.....	141	177	117	102
Remittent Fever	6	5	15	26	Peritonitis.....	30	44	48	61
Typhus	432	362	410	442	Tubes Mesenterica.....	100	116	139	192
Erysipelas	61	95	71	116	Worms.....	3	8	19	19
Syphilis	12	21	28	34	Ascites.....	21	24	29	26
Hydrophobia	2	1	1	..	Ulceration (of Intestines, &c., &c.)	21	25	36	34
II. Inflammation	18	..	..	..	Hernia.....	34	31	35	58
Hæmorrhage	30	29	24	37	Colic or Ileus.....	37	38	36	31
Dropsy	392	413	145	204	Intussusception.....	6	4	9	31
Abscess	23	10	18	18	Stricture.....	6	6	8	7
Noma .....	..	3	9	3	Hæmatemesis.....	11	14	13	21
Mortification	49	53	44	57	Disease of Stomach, &c., &c., &c.	66	65	78	79
Puipura	5	2	5	16	Disease of Pancreas .....	..	..	..	..
Scrofula	36	40	75	53	Hepatitis	16	22	49	44
Cancer	141	194	235	177	Jaundice.....	28	32	34	31
Tumour	13	5	3	8	Disease of Liver, &c., &c.	97	131	131	149
Gout	14	4	3	20	VII. Nephritis	2	..	6	10
Atrophy	150	189	224	239	Ischuria	1	2	2	3
Debility	214	270	300	337	Diabetes	8	12	4	9
Malformations	23	31	51	49	Cystitis	6	3	3	8
Sudden Deaths	174	207	137	173	Stone	6	6	7	12
					Stricture	14	13	13	16
					Disease of Kidneys, &c., &c., &c.	55	75	91	116
					VIII. Childbirth	80	133	101	146
					Paramenia .....	..	5	3	2
					Ovarian Dropsy	7	6	16	15
					Disease of Uterus, &c., &c., &c.	27	30	30	42
					IX. Arthritis	1	4	3	1
					Rheumatism	31	35	62	73
					Disease of Joints, &c., &c., &c.	42	59	56	67
					X. Carbuncle	3	..	1	4
					Phlegmon .....	..	2	9	9
					Ulcer	11	4	16	19
					Fistula	6	1	9	1
					Disease of Skin, &c., &c., &c.	..	5	18	13
					XII. Old Age	1,018	1,127	612	971
					Intemperance .....	..	15	17	12
					Privation	7	8	7	12
					Violent Deaths	292	377	434	294
					Causes not specified	68	87	54	44

* The mortality of the district of Lewisham, and sub-district of Hampstead, was included in the Metropolitan returns at the commencement of 1847, for the first time. Therefore the deaths for previous years are not contained in the above table. In the Quarters ending March they were respectively (1840) 170, (1841) 158; (1842) 57; (1843) 128; (1844) 171; (1845) 158; (1846) 142.

[†] Under the head of "sudden deaths" are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the Coroner in vague terms, such as "found dead," "natural causes," &c., &c.

[Sept.]

QUARTERLY METEOROLOGICAL TABLE,
Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

Weeks ending	Phases of the Moon.	THERMOMETERS.											
		Mean. Inches	Dew Point. Inches	Self Registering. Point.	Highest in the Sun.	Lowest on the Grass.	Mean of 7 observations each day.						
Jan.	2 Full, 1st	30.977	37.6	19.0	34.0	23.6	10.4	29.0	23.8	45.5	43.3	11.0	20.0
"	9 Last quarter, 9th	39.90	46.0	29.6	40.6	34.0	6.6	37.3	—	—	16.3	30.6	36.7
"	16 New, 17th, 1st qrt	29.92	42.8	32.0	37.3	27.1	10.2	32.2	—	—	18.1	31.9	35.7
"	23 New, 17th, 1st qrt	29.83	42.8	32.0	35.2	29.9	5.3	32.2	—	—	19.5	25.6	34.8
"	30 Full, Jan. 31st	29.218	49.3	30.0	45.7	37.0	8.7	41.7	37.7	56.6	51.8	17.6	30.4
Feb.	6 Full, Jan. 31st	29.761	46.8	38.5	38.5	51.3	7.3	24.8	31.6	59.3	47.0	17.5	24.0
"	13 Last qr., Feb. 8th	29.558	36.0	12.0	32.0	17.5	14.5	25.6	21.9	54.0	41.9	10.7	16.7
"	20 New, 15th	29.744	54.0	37.1	50.1	44.1	9.3	14.5	41.2	65.5	56.6	31.2	36.0
"	27 1st quarter, 22nd	30.067	46.1	26.0	40.4	32.2	8.2	35.8	29.2	58.2	50.1	15.5	22.2
Mar.	6 Full, Mar. 2nd	30.246	44.4	29.6	41.6	33.0	8.6	37.9	33.0	63.0	50.3	15.3	27.3
"	13 Last quarter, 10th	30.007	47.5	18.7	42.1	28.7	13.4	35.7	27.9	67.0	57.8	9.0	30.6
"	20 New, 16th	29.695	61.2	33.7	58.3	33.7	2.1	16.9	48.8	35.3	77.3	71.9	20.8
"	27 1st quarter, 23rd	29.781	60.7	31.8	58.3	33.7	0.3	21.3	46.6	40.4	89.0	76.0	20.2
Mean,	Highest, or Lowest of the 13 weeks.	29.846	61.2	12.0	42.6	31.3	10.8	37.2	*32.2	*89.0	*54.7	9.0	25.3

* Mean and Highest of ten weeks.
† Deaths enumerated under the heads "violent" and "sudden," chiefly consist of cases returned by the Coroner, many of which are registered, not when they occur, but at uncertain periods; and they are, therefore, excluded from this comparison of weeks.

+ The ages of 4 were not specified in the Returns.

‡ Deaths at Three Ages, exclusive of violent and sudden Deaths.

§ Deaths from All Causes, exclusive of violent and sudden Deaths.

|| Deaths from All Diseases.

||| Deaths from All Diseases, exclusive of violent and sudden Deaths.

**** Deaths from All Diseases, exclusive of violent and sudden Deaths.

|||| Deaths from All Diseases, exclusive of violent and sudden Deaths.

||||| Deaths from All Diseases, exclusive of violent and sudden Deaths.

|||||| Deaths from All Diseases, exclusive of violent and sudden Deaths.

||||||| Deaths from All Diseases, exclusive of violent and sudden Deaths.

||||||| Deaths from All Diseases, exclusive of violent and sudden Deaths.

REMARKS ON THE WEATHER DURING THE QUARTER ENDING
MARCH 31st, 1847,

By JAMES GLAISHER, Esq., *of the Royal Observatory, Greenwich.*

THE mean temperature of the quarter at Greenwich was $37^{\circ}4$, which is $6^{\circ}3$ below that of the corresponding quarter of 1846; 2° above that of 1845; $1^{\circ}6$ below that of 1844; and $1^{\circ}6$ below that of the quarter for 25 years. The mean temperature of the week ending January 25th, was $41^{\circ}7$; that of the preceding week was $32^{\circ}6$; and that of the following week was $34^{\circ}8$: these numbers indicate great and frequent changes. The mean temperature of the week ending February 13th, was $25^{\circ}6$, being the lowest in the quarter. This remarkable week deserves particular mention. At Greenwich the departures from the mean on the 8th, 9th, 10th, 11th, 12th, and 13th were $15^{\circ}3$, $16^{\circ}3$, $12^{\circ}4$, $9^{\circ}0$, $15^{\circ}7$, and $13^{\circ}6$ respectively. This very great and long continued fall below the average of the season appears to have applied to a zone of the country only, but to have been very uniform within that zone; the southern limit of which was in latitude $50^{\circ}45'$, and the northern limit in latitude 52° . This remarkable cold was most severe in the county of Sussex, and particularly at Uckfield, in latitude $50^{\circ}59'$; between this latitude and $51^{\circ}30'$ it was very severe; beyond $51^{\circ}30'$, and so extending to 52° , it was gradually less and less. In a letter addressed to me by C. L. Prince, Esq., of Uckfield, giving an account of the weather of this week, he states that

On the

8th day	the lowest reading of the thermometer was 14° , and the highest was 35°			
9th	"	15	"	33
10th	"	15	"	36
11th	"	19	"	40
12th	"	1!	"	33
13th	"	17	"	34
14th	"	19	"	44
15th	"	40!	"	53!

It may be interesting to take an extract from my own observations, taken at Dartmouth Terrace, Blackheath, in the parish of Lewisham, corresponding to the above.

On the

8th day	the lowest reading of the thermometer was $17^{\circ}0$, and the highest was $30^{\circ}0$			
9th	"	$16^{\circ}6$	"	$29^{\circ}0$
10th	"	$15^{\circ}0$	"	$37^{\circ}5$
11th	"	$21^{\circ}0$	"	$36^{\circ}5$
12th	"	$6^{\circ}0$	"	$33^{\circ}5$
13th	"	$17^{\circ}0$	"	$33^{\circ}5$
14th	"	$20^{\circ}0$	"	$45^{\circ}0$
15th	"	$44^{\circ}0$	"	$52^{\circ}5$

The very close agreement between these two series of observations, day by day, proves that the great cold during this week was very uniform through this extent of country in latitude. From the circumstance of the minimum reading at Beckington,

in Somersetshire, whose latitude is only 6' less than that of Lewisham, and whose longitude is 2° 22' west, being 5°, differing by 1° only from the minimum at the latter place, the depression of temperature would seem to have extended across the whole country between these latitudes. Its southern limit appears to have been Chichester, and those places on its parallel, and its northern limit appears to have corresponded with a parallel passing a little south of Thwaite and Cambridge.

During the months of February and March the hygrometrical state of the air was very remarkable on account of its great dryness generally, and particularly at times when the temperature of the air was very low. From the numbers contained in the quarterly tables and abstracts, it would appear that this great dryness was general throughout the whole of the country, and from letters I have received from John Fletcher Miller, Esq., of Whitehaven, it seems to have been so in almost an equal degree at that place, notwithstanding its proximity to the Irish Sea. We may, therefore, consider that the weather at Greenwich in this respect during the quarter ending March 31st, 1847, represents that of the country generally.

The horizontal movement of the air was about 828 miles per week; being less than it usually is at this season by 200 miles.

The highest and lowest readings of the thermometer in the quarter, are shown for Greenwich, and for other places in the subjoined quarterly table.

The highest reading of the thermometer, whose bulb was placed in the full rays of the sun, and protected from lateral wind striking it, was 89°: the highest reading of a thermometer placed on the grass, was 95°, and the lowest was 9°; the lowest on flax on grass, was 2°.

Vegetation during the past quarter has been subjected to frequent low temperatures. In January, the reading of the thermometer on grass was below 32° on 25 nights; the lowest was 13°; and it was several times below 20°: in February it was 20 nights below 32°: the lowest was 10°: there were two readings at 12°, and there were several below 20°. In March, the reading was below 32° on part of 25 nights; the lowest being 9°: and there were several below 20°: so that vegetation through the whole quarter has been almost continually subjected to low temperatures at night, and in consequence of the dryness of the atmosphere during the day the evaporation from vegetation has been large, and therefore both during the night and day its temperature has been below the average of the season: consequently the sap has scarcely risen in trees, and vegetation generally is very backward.

Upon the whole the weather in this quarter has been more severe, and painful to the senses, than in either of the corresponding quarters in the three preceding years, and much more so than has been indicated by the thermometers, in consequence of the extreme dryness of the atmosphere causing the moisture from the skin to evaporate quickly, and thus subjecting it to the temperature of evaporation, which throughout this quarter has been much below that of the air.

The winter of 1846-7 may be considered to have commenced suddenly on November 27th, 1846, and to have continued fully to the end of this quarter.

QUARTERLY METEOROLOGICAL TABLE.

NAMES OF THE PLACES.	WIND.		RAIN.		Mean Weight of Vapor required to saturate Air, per cubic foot	Mean Degree of Humidity.	Whole amount of Water in a Metre-sphere.	Column of Atmosphere.	Foot of Cube.	Weight of a Cubic foot of Atmosphere.	Foot of Cube.	Weight of a Cubic foot of Air.	Foot of Cube.	Weight of a Cubic foot of Atmosphere.	Foot of Cube.	Weight of a Cubic foot of Air.	Foot of Cube.	Weight of a Cubic foot of Atmosphere.	Foot of Cube.	Weight of a Cubic foot of Air.	Foot of Cube.	Weight of a Cubic foot of Atmosphere.	Foot of Cube.	
	General	Direction.	Amount Collected.	Number of Days it took to collect 10.	Cloud 0-10.	Mean Amount of Rain.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	Mean Weight of Vapor required to saturate Air.	
Guernsey	41.6	..	o	E.
Helston	41.9	59.0	34.0	1.4	E.
Falmouth	41.6	55.0	26.0	2.0	N. & E.	7.3	51	11.65	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Truro	41.0	52.0	25.0	1.3	N. & E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Woodfield, Devon	42.7	57.0	26.0	3.1	N.E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Exeter	40.6	60.0	18.0	42.0	E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brighton, Black Rock	36.9	58.0	18.0	40.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chichester	37.3	67.0	1.0	66.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Saffron Walden	35.3	61.0	5.0	56.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Beckington, Somerset	37.4	61.6	10.0	54.5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greenwich Observatory	29.769	37.2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Walworth, Surrey	38.1	64.2	18.7	45.5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cambidge Observatory	29.760	38.0	63.5	19.0	44.5	2.8	E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thwaite, Suffolk	37.9	55.8	58.0	28.0	30.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Easington, Rutland	36.5	58.3	14.5	43.8	1.7	S.E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whittingham	36.8	60.0	21.0	42.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Derby	36.8	61.6	20.0	41.5	1.3	E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Highclere House, Notts	29.690	38.7	60.2	26.8	33.4	1.2	S.E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Liverpool Observatory	29.716	37.0	62.0	18.0	44.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ardwick, Manchester	38.2	59.0	23.0	36.0	1.5	S.E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whitehaven	29.716	36.5	60.4	17.2	43.2	1.7	S.N.W.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newcastle-on-Tyne	36.7	63.0	21.0	42.0	..	s. by E.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No. of Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

From the preceding table we learn the following particulars :—As the differences between the numbers in the first column, for all places except Uckfield*, are small, and very likely arise from the different methods adopted in reducing the barometer readings to the constant temperature of 32° , we may consider that the pressure of the atmosphere of dry air has been the same at all these places, and as they extend to extreme latitudes, that it has been the same at all parts of England. By taking the means of these numbers, we find that the average pressure of the atmosphere of dry air for England during the quarter ending March 31, 1847, was 29.706 inches.

From the numbers in the second column, we find for the quarter ending March 31, 1847, that the mean temperature of the counties of Cornwall and Devonshire was $41^{\circ}6$, and for the remaining counties it was $37^{\circ}2$.

The range of the temperature has been different at different places, and no simple law depending on the latitude can be deduced from the numbers in the fifth column: the range, however, in Cornwall and Devonshire has been much smaller than in the other parts of England. The mean quarterly range for these counties was $31^{\circ}6$, and that for the remaining counties was $44^{\circ}3$: the extreme range in the above observations was 66° , being the same as that at Uckfield, at which place the thermometer reading was both higher and lower than in any other place in the country, during this quarter.

From the numbers in the sixth column, it would seem that the velocity of the wind has been nearly uniform throughout the country; and from the seventh column we find the mean directions have been S.E. and N.E., except at Durham, where it was N.W. From the numbers in the eighth column, it appears that the average amount of cloud has been nearly the same at all parts of the country, (except at Beckington; but it is very probable that the number above, ranging with this place, may be in error), and such as to cover about three-fifths of the whole sky.

The fall of rain has been the largest in amount in the counties of Cornwall and Devonshire: the mean amount for those counties is 9.5 inches. The fall at Pool Cottage, Hereford, is the next in order of magnitude, being 8.52 inches: the next in order are Whittington and Manchester; and the fall at Durham was only 1.28 inches.

From the numbers in the last five columns the following results are deduced:—

Grains.

The average weight of vapour } in the counties of Cornwall and Devonshire, was 2.6
in a cubic foot of air } in the remaining counties of England 2.6

The additional weight of va- } in the counties of Cornwall and Devonshire, was 0.8
pour required to saturate a } in the remaining counties of England 0.5
cubic foot of air }

The average degree of hu- } in the counties of Cornwall and Devonshire, was 0.762
midity } in the remaining counties of England 0.848

Inches.

The average amount of water held in solution in a ver- } in the counties of Cornwall and Devonshire, was 3.1
tical column of the atmos- } in the remaining counties of England 2.9
phere }

The average weight of a cubic } in the counties of Cornwall and Devonshire, was 0.544
foot of air under its average } in the remaining counties of England 0.549
temperature, humidity, and }
pressure }

So that the counties of Cornwall and Devonshire were not only much warmer, but the degree of humidity of the atmosphere was much less, and the weight of a certain mass of air was less than in any other part of the country.

* The barometer at Uckfield has not been compared with a standard barometer; it would seem that its readings are too high by 0.1 in. or 0.2 in.

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ending 5th July, 1846 and 1847; showing the Increase or Decrease thereof.—(Continued from page 189.)

Sources of Revenue.	Years ending 5th July.			
	1846.	1847.	Increase.	Decrease.
Customs.....	£ 17,688,461	£ 18,792,348	£ 1,103,887	£
Excise	12,025,112	12,733,998	708,886	....
Stamps	6,988,940	7,201,797	212,857	....
Taxes	4,229,899	4,325,732	95,833	....
Property Tax	5,183,912	5,491,936	308,024	....
Post Office.....	794,000	854,000	60,000	....
Crown Lands.....	100,000	112,000	12,000	....
Miscellaneous	193,237	307,621	114,384	....
Total Ordinary Revenue	47,203,561	49,819,432	2,615,871	....
China Money	1,190,859	227,644	....	963,215
Imprest and other Moneys .	215,523	208,190	....	7,333
Repayments of Advances....	1,446,140	804,843	....	641,297
Total Income	50,056,083	51,060,109	2,615,871	1,611,845
Deduct Decrease			1,611,845	
Increase on the Year			1,004,026	

Sources of Revenue.	Quarters ending 5th July.			
	1846.	1847.	Increase.	Decrease.
Customs	£ 4,523,391	£ 4,519,119	£	£ 4,272
Excise	3,104,711	3,291,052	186,341	....
Stamps	1,730,495	1,869,464	138,969	....
Taxes	2,006,427	2,075,001	68,574	....
Property Tax.....	1,009,162	1,036,517	27,355	....
Post Office.....	181,000	215,000	34,000	....
Crown Lands.....	...	...	....	....
Miscellaneous	18,001	7,461	....	10,540
Total Ordinary Revenue	12,573,187	13,013,614	455,239	14,812
China Money	440,000	...	....	440,000
Imprest and other Moneys .	73,939	88,632	14,693	....
Repayments of Advances....	111,607	137,944	26,337	....
Total Income.....	13,198,733	13,240,190	496,269	454,812
Deduct Decrease			454,812	

Increase on the Quarter..... 41,457

Consolidated Fund Operations.—The total income brought to this account in the quarter ending 5th July, 1847, was £18,765,298*.7*. The total charge upon it was £9,531,581*.7*, leaving a surplus of £9,233,717*.7*. The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ending 5th April, 1847, and paid off out of the growing produce of that fund for the quarter ending 5th July, 1847, after deducting £550,000*.7*, paid off out of the Sinking Fund, was £2,916,960*.7*.

The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund in the quarter ending 5th July, 1847, is stated at £796,941*.7*.

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week of the Second Quarter of 1847; together with the Average Prices for the whole Quarter.—(Continued from p. 190.)

Returns received at the Corn Office, 1847.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.
	Weekly Average	Aggregate Average of Six Weeks regulating Duty.	Weekly Average						
Weeks ending									
1847.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		
April 3.	77 1	75 6	51 3	31 8	57 7	51 5	56 10	April	8
10.	74 5	75 6	49 8	32 7	54 10	50 10	56 0		15
17.	74 1	75 5	48 4	29 7	56 1	49 10	50 7		22
24.	75 10	75 9	48 5	29 7	53 6	49 11	52 4		29
May 1.	79 6	76 4	49 6	30 11	55 6	51 10	52 11	May	6
8.	81 10	77 1	51 0	31 6	58 3	53 0	54 11		13
15.	85 2	78 6	52 7	32 11	58 7	54 7	55 0		20
22.	94 10	81 10	55 10	34 3	69 4	57 8	60 11		27
29.	102 5	86 7	56 5	36 3	73 11	59 10	59 3	June	3
June 5.	99 10	90 7	55 3	35 11	72 0	60 3	61 8		10
12.	88 10	92 2	52 0	34 1	67 1	57 8	50 1		17
19.	91 7	93 9	52 1	33 9	76 11	57 5	56 10		24
26.	91 4	94 10	52 4	32 11	64 11	57 8	57 0	July	1
Average of the Quarter	85 10	82 7	51 10	32 9	62 11	54 9	56 4	..	..

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ending 5th April, 5th May, and 5th June, 1847; the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p. 190.)

WHEAT.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th April	102,670	983	103,553	106,884	1,103	107,987	15,990	330	16,320
5th May	131,139	1	131,140	133,631	217	133,848	14,359	114	14,473
5th June	192,942	532	193,474	192,990	525	193,515	10,801	28	10,829

WHEAT-FLOUR.

Months ending.	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1847	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th April	407,569	7,631	415,200	480,799	7,881	488,680	97,835	10,718	108,553
5th May	467,287	12,799	480,086	522,006	19,717	541,723	43,273	3,801	47,074
5th June	475,973	10,018	486,991	492,238	11,701	503,939	27,073	2,118	29,191

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act of the 7th and 8th Victoria, c. 32, for the Weeks ending on Saturday, the 3rd April, the 1st May, the 29th May, and the 26th June, 1847.—(Continued from p. 191.)

ISSUE DEPARTMENT.

	Weeks ending			
	3rd April, 1847	1st May, 1847	29th May, 1847	26th June, 1847
£	£	£	£	
Notes issued	23,554,640	22,506,585	23,290,420	23,676,545
Government Debt	11,015,100	11,015,100	11,015,100	11,015,100
Other Securities	2,984,900	2,984,900	2,984,900	2,984,900
Gold Coin and Bullion	8,066,355	7,083,767	7,806,303	8,227,545
Silver Bullion	1,488,285	1,422,818	1,484,117	1,449,000
Total.....	23,554,640	22,506,585	23,290,420	23,676,545

BANKING DEPARTMENT.

Proprietors' Capital	14,553,000	14,553,000	14,553,000	14,553,000
Rest	3,991,333	3,412,713	3,472,368	3,463,990
Public Deposits	6,001,947	2,299,154	6,977,853	9,796,647
Other Deposits	9,502,091	9,312,048	8,431,900	7,920,706
Seven Day and other Bills	960,294	835,291	766,451	764,036
Total.....	35,008,665	30,412,206	34,201,572	36,498,379
Government Securities, including } Dead Weight Annuities	11,990,079	10,727,319	11,652,305	11,707,217
Other Securities	18,627,116	16,112,676	17,041,936	18,315,772
Notes	3,699,700	2,741,080	4,628,030	5,625,530
Gold and Silver Coin	691,770	831,131	879,301	849,860
Total.....	35,008,665	30,412,206	34,201,572	36,498,379

COUNTRY BANKS.

Average Aggregate Amount of Promissory Notes of Country Banks, which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks by which issued in each part of the Kingdom, during the weeks ending 27th March, 24th April, and 22nd May, 1847.—(Continued from p. 191.)

Banks.	27th March, 1847.	24th April, 1847.	22nd May, 1847.
England—Private Banks	4,542,057	4,725,315	4,614,034
Joint Stock Banks	3,248,528	3,301,057	3,261,316
Scotland—Chartered, Private, and Joint Stock Banks	3,360,348	3,395,524	3,516,944
Ireland—Bank of Ireland	3,857,800	3,803,525	3,623,525
Private and Joint Stock Banks	2,846,036	2,717,709	2,394,894
Total.....	17,855,669	17,943,130	17,400,713

BANKRUPTCY.

An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ending June 30, 1847; showing the Counties and Branches of Industry in which they have occurred.—(Continued from p. 192.)

COUNTIES.	April.	May.	June.	TRADES.	April.	May.	June.
Metropolis.....	26	43	34	<i>Agriculture and connected Trades.</i>			
—				Farmers	1	3	...
Bedford	1	1		Agricultural Implement } Makers, &c.		1	...
Berks	2	...		Corn Factors	1	...	
Bucks.....	2	...	1	Millers and Malsters	1	...	1
Cambridge	4	...		Hop Merchants	2	2	...
Cheshire	1	...		Brewers .....	...	2	...
Cornwall	1	1		Horse and Cattle Dealers, and } Woolstaplers .....	...	4	4
Cumberland	1	...					
Derby	2	...					
Devon	4	2	3				
Dorset	2	4		<i>Mining and connected Trades.</i>			
Durham	4	...		Mining Firms	2	1	...
Essex	3	4	2	Blasting Works .....	...	...
Gloucester	2	1	4				
Hants.....	1	4	4	<i>Manufactures.</i>			
Hereford .....	...	...		Woollen Manufacturers	1	2	...
Hertford	1	2		Cotton ,,,	2	2	1
Huntingdon .....	...	...		Linen ,,, .....	...	...
Kent	3	8	2	Silk ,,, .....	...	...
Lancashire.....	13	13	13	Printers and Dyers	1	2	...
Leicester .....	...	1		Lace Manufacturers	1	2	...
Lincoln .....	...	1		Hosiery ,,, .....	...	1	
Middlesex (exclusive } of the Metropolis) }	3	1	1	Hardware ,,, .....	...	3	...
Monmouth .....	...	...		Earthenware ,,,	1	2	...
Norfolk	2	1	1	Glass ,,, .....	...	2	
Northampton .....	...	2		Paper ,,, .....	...	1	
Northumberland	1	1		Builders	4	10	8
Nottingham	1	5	3	Miscellaneous Manufacturers....	13	12	13
Oxford .....	...	1					
Rutland .....	...	1		<i>Commerce.</i>			
Salop	3	1		Bankers and Merchants	7	6	6
Somerset (including } Bristol)	4	4	4	Shipowners, Warehousemen, } Brokers, and Wholesale }	4	9	11
Stafford	3	3	3	Dealers generally			
Suffolk .....	...	1					
Surrey (exclusive of } the Metropolis) }	1	1	3	<i>Retail and Handicraft Trades.</i>			
Sussex .....	...	...		Bakers .....	...	1	2
Warwick	4	3	3	Butchers	2	1	1
Westmoreland	1	...		Corn and Hay Dealers .....	...	...	3
Wilts	1	...		Innkeepers and Victuallers.....	11	8	5
Worcester	1	2		Wine and Spirit Merchants ...	3	1	2
York (East Riding)	3	6	2	Dealers in Grocery, Drugs, } and Spices	8	8	19
,, (North Riding)	2	3	2	Makers of, and Dealers in, } Clothing	10	15	9
,, (West Riding)	1	2	3	Makers of, and Dealers in, } Furniture	2	3	3
Wales	4	3	2	Coach Builders	2	1	1
Total	90	126	103	Miscellaneous	11	22	13
				Total.....	90	126	103